

A1.1
No. 08/583,009, filed January 1, 1996, now abandoned, which is the U.S. National Stage of International Application No. PCT/NL93/00181, filed September 6, 1993.

The entire disclosure of application Ser. No. 08/583,009 is considered as being part of the disclosure of this application, and the entire disclosure of application Ser. No. 08/583,009 is expressly incorporated by reference herein in its entirety.

In the Claims:

✓
Please cancel claims 1-29.

Please add new claims 30-45 as follows:

30. (NEW) A method for preparing a liquid toner for electrostatic development of electrostatic images, which method comprises:

dispersing pigmented polymer particles in an insulating non-polar carrier liquid;

mixing at least one ionomer, which is not soluble at room temperature, with the liquid containing the pigmented polymer particles;

coating the pigmented polymer particles with the at least one ionomer;

and adding at least one charge director to the liquid containing the coated pigmented polymer particles;

wherein the pigmented polymer comprises a material suitable for use as a toner material in an electrostatic image development application, but which in the presence of charge director alone is unchargeable or not chargeable to an extent suitable for electrostatic development of electrostatic images and

wherein the at least one ionomer is used in an amount effective to impart enhanced chargeability to the toner particles to an extent that the particles can be used to develop an electrostatic image.

31. (NEW) A process for electrostatic development of electrostatic images which comprises:

forming a charged latent electrostatic image on a photoconductive surface;
applying to the charged surface charged particles from a liquid toner prepared according to the method of claim 30; and
transferring the resulting toner image to a substrate.

32. (NEW) A method for producing a liquid toner for an electrostatic imaging method, which imaging method requires that said toner comprise toner particles having a given particle conductivity, said method for producing a liquid toner comprising:

dispersing pigmented polymer particles in an insulating non-polar carrier liquid to form a dispersion;

mixing at least one ionomer which is not soluble at room temperature with the dispersion to form a mixture;

coating the polymer particles with the at least one ionomer; and

adding a charge director to said mixture,

wherein said coating provides to said particles a chargeability sufficient to give said toner particles said given particle conductivity.

A1
cont.
Sub 32

33. (NEW) A method for preparing a liquid toner for a particular process of electrostatic development of electrostatic images, said particular process requiring a given level of toner charge, the toner comprising chargeable toner particles dispersed in a carrier liquid and at least one charge director, the method comprising: providing at least one charge director;

providing a toner precursor material comprising toner precursor particles dispersed in an insulating non-polar carrier liquid, the particles comprising a core material including a pigmented polymer suitable for use as a toner material in the particular process for electrostatic development of electrostatic images, but which is unchargeable by the at least one charge director or which is weakly chargeable by the at least one charge director to an extent that it is not useable in electrostatic development of latent images in the particular process;
coating the toner precursor particles with at least one ionomer component in an

amount effective to impart enhanced chargeability to the pigmented polymer to an extent that the coated particles can be used to develop a latent electrostatic image in the particular process for electrostatic development of electrostatic images, thereby forming said chargeable toner particles,

adding said at least one charge director, in an amount suitable for charging the chargeable toner particles to said given level.

34. (NEW) A method according to claim 32, wherein the at least one ionomer is first heated to a temperature at which the at least one ionomer dissolves in the carrier liquid and then is cooled to a temperature where the at least one ionomer is not soluble in the carrier liquid, thereby coating the particles with the at least one ionomer.

35. (NEW) A method according to claim any of claims 30-33, wherein the particles are pigmented synthetic resin particles.

36. (NEW) A method according to any of claims 30-33, wherein the at least one ionomer is carboxylic acid based and neutralized with metal salts forming ionic clusters.

37. (NEW) A method according to any of claims 30-33, wherein the at least one ionomer is methacrylic acid based and neutralized with metal salts forming ionic clusters.

38. (NEW) A method according to any of claims 30-33, wherein the at least one ionomer is sulfonic acid based and neutralized with metal salts forming ionic clusters.

39. (NEW) A method according to any of claims 30-33, wherein the at least one ionomer is phosphoric acid based and neutralized with metal salts forming ionic clusters.

40. (NEW) A method according to any of claims 30-33, wherein the at least one ionomer is ethylene based and neutralized with metal salts forming ionic clusters.

41. (NEW) A method according to any of claims 30-33, wherein the coating comprises less than 20 percent by weight of the particles.

42. (NEW) A method according to any of claims 30-33, wherein the coating comprises less than 10 percent by weight of the particles.

43. (NEW) A method according to any of claims 30-33, wherein the coating comprises less than 5 percent by weight of the particles.

44. (NEW) A method according to any of claims 30-33, wherein the coating comprises a thickness of greater than 0.02 micrometers.

45. (NEW) A method according to any of claims 30-33, wherein the pigmented polymer particles are chargeable by the at least one charge director to less than about 7 pmho/cm, in the absence of said coating.

REMARKS

Claims 30-45 are pending in the present application. Claims 1-29 have been canceled and new claims 30-45 have been added. New claim 30 is similar to claim 18 which issued in parent 6,337,168. New claim 30 is broader than claim 18 in the sense that it does not specify that the pigmented polymer particle, in the presence of charge director alone, is chargeable by the at least one charge director to less than or equal to 7 pmhos/cm. Rather, claim 30 recites that the pigmented polymer particle, in the presence of charge director alone, is not chargeable to an extent suitable for electrostatic development of electrostatic images. Support for this clause can be found at page 7, lines 1-6 of the specification as originally filed. New claim 31 corresponds to issued claim 31. New claim 32 corresponds to claim 55, which was